

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

IN THE MATTER OF:

MARTHA C. ROSE CHEMICALS, INC. SITE
Holden, Missouri.

CENTRAL ILLINOIS PUBLIC SERVICE COMPANY,
CENTRAL LOUISIANA ELECTRIC COMPANY, INC.,
COLORADO SPRINGS DEPARTMENT OF UTILITIES,
COMMONWEALTH EDISON COMPANY,
GENERAL MOTORS CORPORATION,
ILLINOIS POWER COMPANY,
INTERSTATE POWER COMPANY,
KANSAS POWER & LIGHT COMPANY,
LOUISIANA POWER & LIGHT COMPANY/
NEW ORLEANS PUBLIC SERVICE INC.,
MIDWEST POWER, a division of
Midwest Power Systems, Inc.
MISSOURI PUBLIC SERVICE COMPANY,
NEW ENGLAND POWER SERVICE COMPANY,
OKLAHOMA GAS & ELECTRIC COMPANY
OMAHA PUBLIC POWER DISTRICT
SOUTHWESTERN ELECTRIC POWER COMPANY,
AND
WEST TEXAS UTILITIES COMPANY,

Respondents.

Proceeding Under Section 106(a) of the
Comprehensive Environmental Response,
Compensation, and Liability Act of 1980,
as amended (42 U.S.C. § 9606(a))



Site:	Rose, Martha
ID#:	MOD980633069
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Other:	9-2-92
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Docket No.
VII-92-F-0026

ADMINISTRATIVE ORDER



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SUPERFUND RECORDS

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ADMINISTRATIVE ORDER
FOR REMEDIAL DESIGN AND REMEDIAL ACTION

I. INTRODUCTION AND JURISDICTION

1. This Order directs Respondents to perform the remedial design for the remedy described in the Record of Decision, dated March 6, 1992, for the Martha C. Rose Chemicals, Inc. Site, and

to implement the design by performing a remedial action. This Order is issued to Respondents by the United States Environmental Protection Agency ("EPA") under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), and further delegated to the EPA Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-B.

2. On August 6, 1992, prior to issuing this Order, EPA notified the State of Missouri, Department of Natural Resources, that EPA would be issuing this Order.

II. DEFINITIONS

3. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

A. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 et seq.

B. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day.

C. "EPA" shall mean the United States Environmental Protection Agency.

D. "Hazardous Substances" shall mean any hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

E. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, and codified at 40 C.F.R. Part 300, including any amendments thereto.

F. "Operation and Maintenance" or "O&M" shall mean all activities required under the Operation and Maintenance Plan developed by Respondents pursuant to this Order and Statement of Work, and approved by EPA.

G. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

H. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the Record of Decision and Statement of Work or established pursuant to the Statement of Work, that the Remedial Action and Work required by this Order must attain and maintain.

I. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Site signed on March 6, 1992 by the Regional Administrator, EPA Region VII and all attachments thereto, as set forth in Attachment 1 to this Order.

J. "Remedial Action" or "RA" shall mean those activities, except for Operation and Maintenance, to be undertaken by Respondents in accordance with the SOW to implement the final plans and specifications contained in the Remedial Design Work Plan approved by EPA, including any additional activities required under Sections X [Failure to Attain Performance Standards], XI [EPA Periodic Review], XII [Additional Response Actions], XIII [Endangerment and Emergency Response], and XIV [EPA Review of Submissions] of this Order.

K. "Remedial Design" or "RD" shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the approved Remedial Design Work Plan and SOW.

L. "Statement of Work" or "SOW" shall mean the Statement of Work for implementation of the Remedial Design, Remedial Action, and Operation and Maintenance at the Site, as set forth in Attachment 2 to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order.

M. "Section" shall mean a portion of this Order identified by a Roman numeral and including one or more Paragraphs.

N. "Site" shall mean the Rose Chemicals Superfund Site, located in Holden, Johnson County, Missouri, as described in the Record of Decision, and depicted generally on the map in Attachment 3 to this Order. The Site includes all areas to which PCBs have been released as a result of Rose Chemicals operations.

O. "State" shall mean the State of Missouri.

P. "United States" shall mean the United States of America, and shall include EPA.

Q. "Work" shall mean all activities Respondents are required to perform under this Order, including Remedial Design, Remedial Action, Operation and Maintenance, and any activities required to be undertaken pursuant to Sections VII through XXIII of this Order, including the SOW.

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III. FINDINGS OF FACT

4. The Martha C. Rose Chemicals, Inc. ("Rose Chemicals") Site is located in the City of Holden, Johnson County, Missouri. The Site consists of the property upon which Rose Chemicals operated, currently owned by the City of Holden, and all areas to which polychlorinated biphenyls ("PCBs") have been released as a result of Rose Chemicals' operations, including an unnamed tributary and East Pin Oak Creek.

5. In late 1981 or early 1982, Rose Chemicals began operations as a PCB processing facility. Rose Chemicals was authorized to decontaminate mineral oil dielectric fluids containing PCBs equal to or less than 10,000 parts per million ("ppm") and to process PCB transformers and capacitors for

disposal. During its period of operation, Rose Chemicals received approximately 23 million pounds of PCBs, PCB items and PCB-contaminated materials. Rose Chemicals ceased operations at the site in February 1986, abandoning approximately 14 million pounds of PCBs, PCB items and PCB-contaminated materials at the Site.

6. As a result of Rose Chemicals' operations, PCBs were released to the environment, contaminating facility buildings, surface and subsurface soils, and a nearby tributary and East Pin Oak Creek.

7. Pursuant to an Administrative Order on Consent, Docket No. 87-F-0007, issued by Region VII of the EPA on October 29, 1987 to a group of potentially responsible parties (commonly referred to as the Rose Chemicals Steering Committee), PCBs, PCB items and PCB-contaminated materials were removed from the Site and disposed of or treated at a chemical waste landfill or incineration facility. Under the terms of this Administrative Order on Consent, the Rose Chemicals Steering Committee ("RCSC") also conducted a remedial investigation ("RI") and feasibility study ("FS").

8. As a result of the RI, it was determined that significant amounts of PCB contamination remained at the Site, in the form of PCB-contaminated buildings, surface and sub-surface soils, and sediments and/or soils in an unnamed tributary and East Pin Oak Creek.

9. In the time period from approximately 1981 through February 1986, Central Illinois Public Service Company, Central Louisiana Electric Company, Inc., Colorado Springs Department of Utilities, Commonwealth Edison Company, General Motors Corporation, Illinois Power Company, Interstate Power Company, Iowa Public Service Company (now Midwest Power), Kansas Power & Light Company, Louisiana Power & Light Company/New Orleans Public Service Inc., Missouri Public Service Company, New England Power Service Company, Oklahoma Gas & Electric Company, Omaha Public Power District, Southwestern Electric Power Company, and West Texas Utilities Company, each arranged, by contract, agreement or otherwise for the disposal or treatment of, or arranged with a transporter for transport for disposal or treatment of, PCBs, PCB items and/or PCB-contaminated materials owned or possessed by that Respondent. These PCBs, PCB items and/or PCB-contaminated materials owned or possessed by these Respondents were transported to and were present at the Site.

10. The Respondents identified in Paragraph 9 are collectively referred to as the "Respondents", and:

A. Respondent Central Illinois Public Service Company is a corporation authorized to conduct business in the State of Illinois, with a principal business office located in Springfield, Illinois.

B. Respondent Central Louisiana Electric Company, Inc. is a corporation authorized to conduct business in the State of

Louisiana, with a principal business office located in Pineville, Louisiana.

C. Respondent Colorado Springs Department of Utilities is a utility company operating under the laws of the State of Colorado, with a principal business office located in Colorado Springs, Colorado.

D. Respondent Commonwealth Edison Company is a corporation authorized to conduct business in the State of Illinois, with a principal business office located in Chicago, Illinois.

E. Respondent General Motors Corporation is a Delaware corporation authorized to conduct business in the State of Michigan, with a principal business office located in Warren, Michigan.

F. Respondent Illinois Power Company is a corporation authorized to conduct business in the State of Illinois, with a principal business office located in Decatur, Illinois.

G. Respondent Interstate Power Company is a Delaware corporation authorized to conduct business in the State of Iowa, with a principal business office located in Dubuque, Iowa.

H. Respondent Kansas Power & Light Company is a Kansas corporation authorized to conduct business in the State of Kansas, with a principal business office located in Topeka, Kansas.

I. Respondent Louisiana Power & Light Company/New Orleans Public Service Inc., is a Louisiana corporation

authorized to conduct business in the State of Louisiana, with a principal business office located in New Orleans, Louisiana.

J. Respondent Midwest Power, a division of Midwest Power Systems, Inc., is a corporation authorized to conduct business in the State of Iowa, with a principal business office located in Sioux City, Iowa.

K. Respondent Missouri Public Service Company is a corporation authorized to conduct business in the State of Missouri, with a principal business office located in Kansas City, Missouri.

L. Respondent New England Power Service Company is a corporation authorized to conduct business in the State of Massachusetts, with a principal business office located in Westborough, Massachusetts.

M. Respondent Oklahoma Gas & Electric Company is a utility company operating under the laws of the State of Oklahoma, with a principal business office located in Oklahoma City, Oklahoma.

N. Respondent Omaha Public Power District is a utility operating under the laws of the State of Nebraska, with a principal business office located in Omaha, Nebraska.

O. Respondent Southwestern Electric Power Company is a Delaware corporation authorized to conduct business in the State of Louisiana, with a principal business office located in Shreveport, Louisiana.

P. Respondent West Texas Utilities Company is a corporation authorized to conduct business in the State of Texas, with a principal business office located in Abilene, Texas.

11. From approximately January 1988 to September 1990, the RCSC conducted a remedial investigation and feasibility study ("RI/FS") for the Site pursuant to CERCLA and the National Contingency Plan.

12. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of the availability of the Proposed Plan for Remedial Action on June 20, 1991, and provided opportunity for public comment on the proposed remedial action.

13. The decision by EPA on the Remedial Action to be implemented at the Rose Chemicals Site is embodied in a final Record of Decision ("ROD"), executed on March 6, 1992, on which the State had a reasonable opportunity to review and comment. The Record of Decision is attached to this Order as Attachment 1 and is incorporated by reference. The Record of Decision is supported by an administrative record that contains the documents and information upon which EPA based the selection of the response action.

14. The hazardous substances at the Site are polychlorinated biphenyls ("PCBs").

15. Data collected during the RI indicate that subsurface soils are contaminated at levels up to 700 ppm PCBs, surface soils are contaminated at levels exceeding 500 ppm PCBs in the

most highly contaminated soils, and sediment in East Pin Oak Creek and the unnamed tributary that is adjacent to the facility is contaminated at levels exceeding the health based level of 0.18 ppm PCBs. The data also indicates the on-Site buildings are PCB-contaminated, including the concrete floor slabs which are contaminated at levels as high as 670,000 ppm PCBs.

16. PCB contamination at the Site exists in soils, sediments and structures. The potential for exposure to humans from PCB-contaminated soils is through direct contact and inhalation of dust or PCBs that have vaporized. The potential for exposure to humans from the PCB-contaminated sediment is through direct contact, ingestion of sediments, and human ingestion of beef cattle contaminated through ingestion of contaminated sediment and consumption of water from the streams. The potential for exposure to humans from the PCB-contaminated structures is through direct contact and vaporization of PCBs to the air.

17. The primary populations presently at risk and those who may be at risk in the future are residents and users of the Site. The carcinogenic risk ranges from 2.2×10^{-8} to 1.3×10^{-4} while the non-carcinogenic ^{MDO/RFO Ratio} ~~risk~~ ranges from 2.4×10^{-4} to 8.8.

18. The major components of the remedy chosen in the Record of Decision calls for: a) excavation and off-Site disposal of an estimated 826 cubic yards of PCB-contaminated sediments above 0.18 ppm PCBs from an unnamed tributary and East Pin Oak Creek; b) excavation and offsite disposal or treatment of an estimated

4,788 cubic yards of soil contaminated above 10 ppm PCBs; c) dismantling of the Main Building and South Warehouse, including floor slabs and insulation, and the offsite disposal or treatment of the debris; d) backfilling all excavated areas with clean soil; e) ground water monitoring for a minimum 10-year period; and f) deed restrictions prohibiting the installation of ground water wells for purposes other than monitoring. The Record of Decision allows for treatment of PCB-contaminated soils, sediments and other debris either on-Site or off-Site prior to off-Site disposal.

IV. CONCLUSIONS OF LAW

19. The Rose Chemicals Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

20. Respondents are each a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

21. Respondents are each a "liable party" as defined in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are each subject to this Order under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

22. The substances listed in Paragraph 14 are found at the Site and are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

23. These hazardous substances have been, are being released or pose a threat of release at and from the Site into the soils, ground water, surface water, and air.

24. The past disposal and migration of hazardous substances from the Site are a "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

25. The potential for future migration of hazardous substances from the Site poses a threat of a "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

V. DETERMINATIONS

Based upon the foregoing Findings of Fact and Conclusions of Law, the Regional Administrator of EPA, Region VII has determined that:

26. The actual release or substantial threat of a release of one or more hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

27. The actions required by this Order are necessary to protect the public health and welfare and the environment.

VI. ORDER

28. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions, including, but not limited to, all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order:

VII. NOTICE OF INTENT TO COMPLY

29. Respondents shall provide, not later than seven (7) days after the effective date of this Order, written notice to EPA's Remedial Project Manager ("RPM") stating whether they will comply with the terms and provisions of this Order. If Respondents do not unequivocally commit to perform the RD and RA as set forth in the ROD and as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondents' assertions.

VIII. PARTIES BOUND

30. This Order shall apply to and be binding upon each Respondent identified in Paragraph 10, their directors, officers, employees, agents, successors, and assigns. Respondents are jointly and severally responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of any Respondent shall alter any of that Respondent's responsibilities under this Order.

31. Each Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in its assets or stock are transferred to the

prospective owner or successor. Respondents shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work required by this Order, within fourteen (14) days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondent with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

IX. WORK TO BE PERFORMED

32. Respondents shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

33. All aspects of the Work to be performed by Respondents pursuant to this Order shall be under the direction and supervision of the qualified Supervising Contractor, the selection of which shall be subject to disapproval by EPA. Within fourteen (14) days after the effective date of this Order, Respondents shall notify EPA in writing of the name, title and qualifications of any contractor proposed to be the Supervising Contractor. The notification shall include identification of primary support entities and staff proposed to be used in carrying out Work under this Order. EPA will then issue a notice of disapproval or an authorization to proceed. If at any time after receiving an authorization to proceed, Respondents propose to use a different Supervising Contractor, Respondents shall give written notice to EPA and must obtain an authorization to proceed from EPA before the new Supervising Contractor performs, directs or supervises any Work under this Order.

34. If EPA disapproves the proposed Supervising Contractor, EPA will notify Respondents in writing. Respondents shall submit to EPA, within thirty (30) days after receipt of EPA's written disapproval of the Supervising Contractor previously proposed, a list of contractors, including qualification of each and primary support entities and staff, that would be acceptable to Respondents. EPA will thereafter provide written notice to Respondents of the names of the contractors that it disapproves and an authorization to proceed with respect to any of the other contractors. Respondents may then select any approved contractor

from that list that is not disapproved and shall notify EPA of the name of the contractor selected within twenty-one (21) days of receipt of EPA's authorization to proceed.

35. Remedial Design

A. Within thirty (30) days of receipt of EPA's authorization to proceed issued pursuant to Paragraph 33 or 34, Respondents shall submit a work plan for the design of the Remedial Action at the Site ("Remedial Design Work Plan" or "RD Work Plan") to EPA for review and approval in accordance with Section XIV [EPA Review of Submissions] of this Order. The RD Work Plan shall include a step-by-step plan for completing the Remedial Design for the remedy set forth in the ROD in accordance with the SOW and for attaining and maintaining all requirements, including Performance Standards, identified in the ROD and the SOW. The RD Work Plan shall include plans and schedules for implementation of all Remedial Design and predesign tasks identified in the SOW including, but not limited to, plans and schedules for completion of: (1) a Preliminary Design submittal; (2) an Intermediate Design submittal; (3) a Pre-final Design submittal; (4) a Final Design submittal; (5) design sampling and analysis plan (including, but not limited to, a Remedial Design Quality Assurance Project Plan (RD QAPP) developed in accordance with Section XVI [Quality Assurance, Sampling and Data Analysis] of this Order; (6) a Contingency Plan; (7) a Construction Quality Assurance Project Plan (CQAPP); (8) Pilot Study/Treatability Studies; (9) a monitoring well installation/abandonment plan;

(10) a sub-surface soil contamination excavation plan; (11) a cross-contamination/recontamination prevention plan; (12) a post-excavation verification plan; and (13) a plan for gathering additional data or information necessary to meet the requirements of this Order. Respondents shall also, within thirty (30) days of receipt of EPA's authorization to proceed pursuant to Paragraph 33 or 34, prepare and submit to EPA for review, a Site Health and Safety Plan for field design activities. The Site Health and Safety Plan shall conform to the applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.

B. The RD Work Plan shall include plans and schedules for implementation of all Remedial Design and predesign tasks identified in the Statement of Work, and shall comport with EPA's "Superfund Remedial Design and Remedial Action Guidance", OSWER Directive 9355.0-4A. Upon approval by EPA, the RD Work Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

C. Upon approval of the RD Work Plan by EPA and submittal of the Health and Safety Plan for all field design activities to EPA, Respondents shall implement the RD Work Plan in accordance with the schedule in the approved RD Work Plan. Any violation of the approved RD Workplan shall be a violation of this Order. Unless otherwise directed by EPA, Respondents shall not implement Remedial Design activities at the Site prior to their receipt of EPA's written approval of the RD Work Plan.

D. Within sixty (60) days of receipt of EPA's written approval of the RD Work Plan, Respondents shall submit a Preliminary Design to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order. The Preliminary Design submittal shall include, at a minimum, the following: (1) design criteria; (2) results of any pilot study or treatability study; (3) results of additional field sampling and pre-design Work; (4) project delivery strategy; (5) preliminary plans, drawings and sketches; (6) required specifications in outline form; (7) the identification and evaluation of any value engineering proposals; (8) a preliminary construction schedule; and (9) Construction Quality Assurance Project Plan ("CQAPP") objectives.

E. If Respondents perform a value engineering study that results in a design change affecting the environmental design criteria as determined by EPA, Respondents shall submit an Intermediate Design to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order within thirty (30) days of receipt of EPA's written approval of the Preliminary Design. The Intermediate Design submittal shall be a continuation and expansion of the Preliminary Design and shall also identify and evaluate any value engineering proposals.

F. Within thirty (30) days of receipt of EPA's written approval of Respondents' Preliminary Design or Intermediate Design (if any), Respondents shall submit a Pre-final Design submittal to EPA for review and approval pursuant to Section XIV

[EPA Review of Submissions] of this Order. The Pre-final Design submittal shall include, at a minimum, the following: (1) design plans and specification; (2) Operation and Maintenance Plan; (3) capital and operating and maintenance cost estimate; (4) initial project schedule for the RA; (5) a CQAPP; (6) a Contingency Plan; and (7) specifications for the Health and Safety Plan. The CQAPP shall detail the approach to quality assurance during construction activities at the Site and shall specify a quality assurance team, independent of the construction contractor, to conduct a quality assurance program during the construction phase of the project.

G. Within thirty (30) days of receipt of EPA's written approval of the Pre-final Design submittal, Respondents shall submit a Final Design submittal to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order. The Final Design submittal shall include, at a minimum, the following: (1) final design plans and specifications (100% complete); (2) final Operation and Maintenance Plan; 3) final construction cost estimate; 4) final CQAPP; (5) final project schedule for the implementation of the Remedial Action; (6) preliminary Field Sampling Plan (directed at measuring progress towards meeting Performance Standards); (7) final Contingency Plan; and (8) final Health and Safety Plan specifications.

H. Upon EPA approval, the Final Design is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

36. Remedial Action

A. Within thirty (30) days of receipt of EPA's written approval of the Final Design, Respondents shall submit a Remedial Action Work Plan ("RA Work Plan") for the performance of the Remedial Action at the Site to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order. The RA Work Plan shall provide for the construction of the remedy in accordance with the ROD and the SOW, as set forth in the design plans and specifications in the approved Final Design submittal. The RA Work Plan shall include, at a minimum, the following: (1) the schedule for completion of the Remedial Action; (2) method for selection of the Remedial Action contractor; (3) schedule for developing and submitting other required Remedial Action plans, if any; (4) methodology for implementation of the CQAPP; (5) a ground water monitoring plan; (6) methods for identifying and satisfying permitting requirements; (7) methodology for implementation of the Operation and Maintenance Plan; (8) methodology for implementation of the Contingency Plan; (9) tentative formulation of the Remedial Action Project Team; (10) schedule for completion of the Construction Quality Control Plan (by constructor); (11) procedures and plans for the decontamination of equipment and the disposal of contaminated materials; and (12) procedures for data collection during the RA and schedule for development and submission of a Performance Standards assessment plan. The RA Work Plan shall also include a schedule for implementing all

Remedial Action tasks identified in the Statement of Work.

Within thirty (30) days of receipt of EPA's written approval of the Final Design, Respondents shall also submit to EPA for review a Health and Safety Plan for field activities required by the RA Work Plan. This Health and Safety Plan for field activities shall conform to applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, the regulations at 29 C.F.R. § 1910.120.

B. Upon approval by EPA, the RA Work Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Unless otherwise directed by EPA, Respondents shall not commence physical on-Site Remedial Action activities at the Site prior to approval of the RA Work Plan.

C. If Respondents seek to retain a construction contractor to assist in the performance of the Remedial Action, Respondents shall submit a copy of the contractor solicitation documents to EPA not later than five (5) days after publishing the solicitation documents.

D. Within ten (10) days of the closing of the contractor solicitation period, Respondents shall notify EPA in writing of the name, title and qualifications of any construction contractor considered to be used in implementing the Remedial Action under this Order. EPA will issue a written notice of disapproval or an authorization to proceed with respect to each contractor identified by Respondents. In the event EPA

disapproves of all construction contractors identified by Respondents, Respondents shall submit to EPA, within thirty (30) days of receipt of such a notice of disapproval, a list of construction contractors, including the qualifications of each contractor, that are acceptable to them. EPA will thereafter provide written notice of the name(s) of any contractors that it disapproves and an authorization to proceed with respect to any of the other contractors. Respondents may select any contractor from that list that is not disapproved and shall notify EPA of the name of the contractor selected within twenty one (21) days of receipt of EPA's authorization to proceed. If at any time thereafter Respondents propose to change the construction contractor, Respondents shall provide written notice to EPA and shall obtain approval from EPA as provided in this Paragraph, before the new construction contractor performs, directs or supervises any Work under this Order.

E. Within thirty (30) days of receipt of EPA's authorization to proceed issued pursuant to Paragraph 36.D, Respondents shall implement the RA Workplan in accordance with the schedules contained therein.

F. The Work performed by Respondents pursuant to this Order shall, at a minimum, achieve the Performance Standards specified in the Record of Decision and in the Statement of Work or established pursuant to the Statement of Work. Confirmation of achieving the Performance Standards will be based upon statistical sampling approved by EPA.

G. Notwithstanding any action by EPA, Respondents remain fully responsible for achievement of the Performance Standards in the Record of Decision and Statement of Work. Nothing in this Order, or in EPA's approval of the Remedial Design or Remedial Action Work Plans, or approval of any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Design or Remedial Action will achieve the Performance Standards set forth in the ROD and in the Statement of Work. Respondents' compliance with such approved documents does not preclude EPA from seeking additional Work to achieve the applicable Performance Standards.

H. Respondents shall, prior to any off-Site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving facility's state and to the EPA Remedial Project Manager of such shipment of hazardous substances. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed ten (10) cubic yards.

(1) Respondents shall include in the written notification, where available: (a) the name and location of the facility to which the hazardous substances are to be shipped; (b) the type and quantity of the hazardous substances to be shipped; (c) the expected schedule for the shipment of the hazardous

substances; and (d) the method of transportation. Respondents shall notify the receiving facility's state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

(2) The identity of the receiving facility and state will be determined by Respondents following the award of the contract for Remedial Action construction. Respondents shall provide the information in Paragraph 36.H.1 above as soon as practicable after the award of the contract and before the hazardous substances are actually shipped.

37. Certification of Completion of the Remedial Action

Within thirty (30) days after Respondents conclude that the Remedial Action has been fully performed and the Performance Standards have been attained, Respondents shall so notify EPA and shall schedule and conduct a pre-certification inspection to be attended by Respondents and EPA. If, after the pre-certification inspection, the Respondents believe that the Remedial Action has been fully performed and the Performance Standards have been attained, Respondents shall submit, within thirty (30) days of the pre-certification inspection, to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order, a written report requesting certification of completion of the Remedial Action. In the report, a registered professional engineer and Respondents' Project Coordinator (designated pursuant to Paragraph 68 of this Order) shall state that the

Remedial Action has been completed in full satisfaction of the requirements of this Order. The written report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of a Respondent or the Respondents' Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If, after completion of the pre-certification inspection and receipt and review of the written report, EPA determines that the Remedial Action or any portion thereof has not been completed in accordance with this Order or that the Performance Standards have not been achieved, EPA will notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action and achieve the Performance Standards. EPA will set forth in the notice a schedule for performance of required activities consistent with the Order and the SOW, or require the Respondents to submit a schedule to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established and approved pursuant to this Paragraph. If EPA concludes, based

on the initial or any subsequent report requesting certification of completion that the Remedial Action has been fully performed in accordance with this Order and that the Performance Standards have been achieved, EPA may notify Respondents that the Remedial Action has been fully performed. EPA's notification shall be based on present knowledge and Respondents' certification to EPA, and shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

38. Certification of Completion of the Work

Within thirty (30) days after Respondents conclude that all phases of the Work have been fully performed, that the Performance Standards have been attained, and that all Operation and Maintenance activities have been completed, Respondents shall submit to EPA a written report by a registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of this Order. The report shall contain the following statement, signed by a responsible corporate official of a Respondent or the Respondents' Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations."

If, after review of the written report, EPA determines that any portion of the Work has not been completed in accordance with this Order, EPA will notify Respondents in writing of the activities that must be undertaken to complete the Work. EPA will set forth in the notice a schedule for performance of required activities consistent with the Order and the SOW, or require the Respondents to submit a schedule to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established and approved pursuant to this Paragraph.

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If EPA concludes, based on the initial or any subsequent report requesting certification of completion that the Work has been fully performed, EPA may notify Respondents that the Work has been completed. EPA's notification shall be based on present knowledge and Respondents' certification to EPA, and shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

39. In the event that EPA determines that additional response activities are necessary to meet applicable Performance

Standards, EPA may notify Respondents that additional response actions are necessary.

40. Unless otherwise stated by EPA, within thirty (30) days of receipt of notice from EPA that additional response activities are necessary to meet any applicable Performance Standard, Respondents shall submit to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order, a work plan for the additional response activities identified in EPA's notice. The plan shall conform to the applicable requirements of Sections IX [Work to be Performed], XVI [Quality Assurance, Sampling and Data Analysis], and XVII [Compliance with Applicable Laws] of this Order. Upon receipt of EPA's written approval of the plan pursuant to Section XIV [EPA Review of Submissions] of this Order, Respondents shall implement the plan for additional response activities in accordance with the provisions and schedule contained in the approved work plan for additional response activities.

XI. EPA PERIODIC REVIEW

41. Pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations, EPA may review the Remedial Action to assure that human health and the environment are being protected by the Remedial Action. Until such time as EPA certifies completion of the Work pursuant to Paragraph 38 of this Order, Respondents shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to allow EPA to conduct the review under CERCLA

Section 121(c). As a result of any review performed under this Paragraph, Respondents may be required to perform additional Work or to modify Work previously performed. In the event additional Work or modifications to Work previously performed are required under this Paragraph, EPA shall provide written notification to Respondents of such additional Work or modifications.

42. Within thirty (30) days of receipt of EPA's notice that additional Work or modifications are required under this Section, Respondents shall submit to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order a work plan for such Work or modifications. This work plan shall conform to the applicable requirements of Sections IX [Work to be Performed], XVI [Quality Assurance, Sampling and Data Analysis], and XVII [Compliance with Applicable Laws] of this Order. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon receipt of EPA's written approval of the work plan, Respondents shall implement the work plan according to the standards, specifications and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional Work or modifications within seven (7) days after receipt of EPA's notice that additional Work or modifications are required.

XII. ADDITIONAL RESPONSE ACTIONS

43. In the event EPA determines that additional response actions are necessary to carry out the Remedial Action selected

in the ROD, written notification of such additional response actions shall be provided by EPA to Respondents' Project Coordinator. If EPA determines that additional response actions are necessary under this Section, EPA may require Respondents to submit a work plan for additional response actions. EPA may also require Respondents to modify any plan, design, or other deliverable required by this Order, including any approved modifications.

44. Within thirty (30) days of receipt of EPA's notice that additional response actions are necessary pursuant to this Section, Respondents shall submit to EPA for review and approval pursuant to Section XIV [EPA Review of Submissions] of this Order a work plan for the additional response actions. This work plan shall conform to the applicable requirements of Sections IX [Work to be Performed], XVI [Quality Assurance, Sampling and Data Analysis], and XVII [Compliance with Applicable Laws] of this Order. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon receipt of EPA's written approval of the work plan, Respondents shall implement the work plan according to the standards, specifications and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional response actions within seven (7) days after receipt of EPA's notice that additional response actions are necessary.

XIII. ENDANGERMENT AND EMERGENCY RESPONSE

45. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall immediately notify EPA's Remedial Project Manager ("RPM"), or, if the EPA RPM is unavailable, EPA's Alternate RPM (each identified in Paragraph 65 of this Order). If neither of these persons is available, Respondents shall notify the EPA Emergency Response Unit, Region VII. Respondents shall take such action in consultation with EPA's RPM or other available EPA officer and in accordance with all applicable provisions of this Order including, but not limited to, the Health and Safety Plan and the Contingency Plan developed pursuant to Section IX [Work to be Performed] and the SOW. In the event that Respondents fail to take appropriate response action as required by this Section, and EPA takes that action instead, EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States.

46. Nothing in the preceding Paragraph or in this Order shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an

actual or threatened release of hazardous substances on, at, or from the Site.

XIV. EPA REVIEW OF SUBMISSIONS

47. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing Respondents to modify and re-submit the submission; or (e) any combination of the above. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in Paragraph 47(a) or (b).

48. In the event of approval, approval upon conditions, or modification by EPA pursuant to Paragraph 47(a), (b) or (c), Respondents shall proceed to take any action required by the plan, report, or other item, as approved, approved with conditions, or modified by EPA.

49. Upon receipt of a notice of disapproval pursuant to Paragraph 47(d), Respondents shall, within twenty-one (21) days or such longer time as specified by EPA in its notice of disapproval, correct the deficiencies and resubmit the deliverable, plan, report, or other item to EPA for review and approval. Notwithstanding receipt of a notice of disapproval, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

50. If any submission is not approved by EPA, Respondents shall be deemed to be in violation of this Order. All deliverables, plans, reports and other items required to be submitted to EPA under the Order, or any portion thereof, shall, upon approval or modification by EPA, be enforceable under this Order.

51. Respondents shall submit three (3) copies of all plans, reports, and data required by the SOW, the Remedial Design Work Plan, the Remedial Action Work Plan, or any other plans or reports to EPA in accordance with the schedules set forth in such plans.

52. All reports and other documents submitted by Respondents to EPA (other than the monthly progress reports referred to in Section XV of this Order) which purport to document Respondents' compliance with the terms of this Order shall be signed by an authorized representative of the Respondents.

XV. PROGRESS REPORTS

53. In addition to the other deliverables set forth in this Order, Respondents shall submit to EPA three (3) copies of written monthly progress reports with respect to actions and activities undertaken pursuant to this Order. Each progress report shall be submitted on or before the 10th day of each month, beginning with the month following the effective date of this Order. Respondents' obligation to submit monthly progress reports continues until EPA provides Respondents written notice

under Paragraph 38 of this Order, or such other time as agreed to by EPA. At a minimum, these progress reports shall: (a) describe the actions which have been taken toward achieving compliance with this Order during the previous month; (b) include a summary of all results of sampling and tests and all other data received or generated by Respondents or their contractors or agents in the previous month; (c) identify all work plans, plans and other deliverables required by this Order, completed and submitted during the previous month; (d) describe all actions including, but not limited to, data collection and implementation of work plans, which are scheduled for the next six (6) weeks and provide other information relating to the progress of construction including, but not limited to, critical path diagrams, Gantt charts and Pert charts; (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; (f) include a description of any modifications to the work plans or other schedules that Respondents have proposed to EPA or that have been approved by EPA; and (g) describe all activities undertaken in support of the Community Relations Plan during the previous month and those to be undertaken in the next six (6) weeks.

54. The Respondent shall notify EPA of any change in the schedule described in the monthly progress report for the performance of any activity including, but not limited to, data

collection and implementation of work plans, no later than seven (7) days prior to the performance of the activity.

55. Upon the occurrence of any event during performance of the Work that Respondents are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. § 11004, Respondents shall within 24 hours of the on-set of such event orally notify the EPA RPM or the Alternate EPA RPM (in the event of the unavailability of the EPA RPM), or, in the event that neither the EPA RPM or Alternate EPA RPM is available, the EPA Emergency Response Section, Region VII. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304. Within twenty (20) days of the onset of such an event, Respondents shall furnish to EPA a written report, signed by the Respondents' Project Coordinator, setting forth the events which occurred and the measures taken, and to be taken, in response thereto. Within thirty (30) days of the conclusion of such an event, Respondents shall submit a report setting forth all actions taken in response thereto.

XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

56. Respondents shall use quality assurance, quality control, and chain of custody procedures for all treatability, decision, compliance and monitoring samples in accordance with EPA's "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984 and May 1986, (EPA-330/9-78-001-R); "Guidelines and Specifications for Preparing Quality Assurance

Program Documentation," June 1, 1987; "Data Quality Objective Guidance," (EPA/540/G87/003 and 004); and any subsequent amendments to such guidelines upon notification by EPA to Respondents of such amendments.

57. Amended guidelines shall apply only to procedures conducted after such notification. Prior to the commencement of any monitoring project under this Order, Respondents shall submit to EPA for approval a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP and applicable guidance documents. Respondents shall ensure that EPA personnel and its authorized representatives are allowed access at all reasonable times to all laboratories utilized by Respondents in implementing this Order. In addition, Respondents shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring. Respondents shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Order perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods which are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis" and the "Contract Lab Program Statement of Work for Organic Analysis," dated February 1988, and any amendments made thereto during the course of the implementation of this Order. Respondents shall ensure that all laboratories they use for analysis of samples taken pursuant to this Order participate in an EPA or EPA-equivalent QA/QC program.

58. Upon request, the Respondents shall allow split or duplicate samples to be taken by EPA or its authorized representatives. Respondents shall notify EPA not less than twenty-one (21) days in advance of any sample collection activity unless shorter time is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow the Respondents to take split or duplicate samples of any samples it takes as part of EPA's oversight of the Respondents' implementation of the Work.

59. Within seven (7) days of receipt of a written request by EPA, Respondents shall submit to EPA three (3) copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondents with respect to the Site and/or the implementation of this Order, unless EPA agrees otherwise.

60. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA and any other applicable statute or regulation.

XVII. COMPLIANCE WITH APPLICABLE LAWS

61. All activities by Respondents pursuant to this Order shall be performed in accordance with the requirements of all Federal and state laws and regulations. Respondents must also comply with all applicable or relevant and appropriate requirements of all Federal and state environmental laws as set

forth in the ROD and the SOW. The activities conducted pursuant to this Order, if approved by EPA, shall be considered to be consistent with the National Contingency Plan.

62. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. § 300.5 of the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

63. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

64. All materials removed from the Site shall be disposed of or treated at a facility approved by EPA's RPM and in accordance with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); with the U.S. EPA "Revised Off-Site Policy," OSWER Directive 9834.11, November 13, 1987; and with all other applicable Federal, state, and local requirements.

XVIII. REMEDIAL PROJECT MANAGER

65. All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Remedial Project Manager (RPM) or Alternate RPM, unless otherwise provided for in this Order. Respondents shall submit to EPA three (3) copies of all documents, including plans, reports, and other

correspondence, which are developed pursuant to this Order, and shall send these documents by overnight mail.

EPA's Remedial Project Manager is:

Steven E. Kinser
Superfund Branch
Waste Management Division
U.S. Environmental Protection Agency
726 Minnesota Avenue
Kansas City, Kansas 66101
(913) 551-7728

EPA's Alternate RPM is:

Ronald King
Superfund Branch
Waste Management Division
U.S. Environmental Protection Agency
726 Minnesota Avenue
Kansas City, Kansas 66101
(913) 551-7568

66. EPA has the unreviewable right to change its RPM or Alternate RPM. If EPA changes its RPM or Alternate RPM, EPA will inform Respondents in writing of the name, address, and telephone number of the new RPM or Alternate RPM.

67. EPA's RPM and Alternate RPM shall have the authority lawfully vested in a RPM and On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. In addition, EPA's RPM or Alternate RPM shall have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action when she or he determines that conditions at the Site constitute an emergency situation or may present an immediate threat to public health or welfare or the environment due to release or threatened release of hazardous substances.

68. Within fourteen (14) days after the effective date of this Order, Respondents shall propose a Project Coordinator in writing to EPA, identifying her or his name, address and telephone number. The Project Coordinator is subject to EPA review and approval. Respondents' Project Coordinator shall be responsible for overseeing Respondents' implementation of this Order. If Respondents wish to change their Project Coordinator, Respondents shall provide written notice to EPA at least five (5) days prior to changing the Project Coordinator, of the name and qualifications of the new Project Coordinator. Any new Project Coordinator is subject to approval by EPA.

XIX. ACCESS TO PROPERTY NOT OWNED BY RESPONDENTS

69. To the extent that the Site or any other property to which access is required for the implementation of this Order is owned in whole or in part by persons other than Respondents, Respondents will secure, or use their "best efforts" to secure from such persons access agreements from the present owner(s) within forty-five (45) days of the effective date of this Order. Such agreements shall provide access for EPA, its contractors and oversight officials, the state and its contractors, and Respondents or Respondents' authorized representatives and contractors. Such agreements shall specify that Respondents are not EPA's representative with respect to any Site activities conducted by Respondents. Copies of such agreements shall be provided to EPA prior to Respondents' initiation of field activities. For purposes of this Paragraph, "best efforts"

includes the payment of reasonable sums of money in consideration of access. However, for purposes of this Order, "best efforts" shall not include payment of money to the City of Holden in consideration for access to its property. If any access agreement, necessary to complete the Work under this Order, is not obtained within the time referenced above, Respondents shall provide written notification to EPA of its failure to obtain such access within fifty (50) days of the effective date of this Order. This notification shall include a description of the steps Respondents have taken in their attempt to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to assist the Respondents in obtaining access, or may take any action pursuant to applicable law.

70. Notwithstanding any provision of this Order, EPA retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA and any other applicable statute or regulation.

XX. DOCUMENT AVAILABILITY

71. Respondents may assert business confidentiality claims covering part or all of the documents or information submitted to EPA pursuant to the terms of this Order to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in Subpart B of 40 C.F.R. Part 2. If no claim of confidentiality accompanies documents or information

when they are submitted to EPA, or if EPA has notified Respondents that the documents or information are not confidential under the standards set forth in CERCLA Section 104(e)(7), the public may be given access to such documents or information without further notice to the Respondents.

72. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by Federal law. If Respondents assert such a privilege in lieu of providing documents, they shall provide EPA the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of the author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the contents of the document, record, or information; and (f) the privilege asserted by Respondents. However, no documents, reports or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

XXI. RECORD PRESERVATION

73. Respondents shall provide to EPA upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports,

sample traffic routing, correspondence, or other documents or information related to the Work.

74. Until ten (10) years after Respondents receipt of EPA's notification pursuant to Paragraph 38, each Respondent shall preserve and retain all records and documents now in its possession or control that relate in any manner to the Site, regardless of any corporate retention policy to the contrary. Respondents shall also instruct their respective contractors and agents to preserve all documents, records and information of whatever kind, nature or description relating to the performance of the Work, until ten (10) years after Respondents' receipt of EPA's notification pursuant to Paragraph 38.

75. At the conclusion of this document retention period, Respondents shall notify the EPA at least ninety (90) calendar days prior to the destruction of any such records or documents, and, upon request by EPA, Respondents shall deliver any such records or documents to EPA.

76. Within thirty (30) days after the effective date of this Order, Respondents shall submit a written certification to EPA's RPM that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site, since notification of potential liability by EPA. Respondents shall not dispose of any such documents without prior approval by EPA. Respondents shall, upon EPA's request and

at no cost to EPA, deliver the documents or copies of the documents to EPA.

XXII. DELAY IN PERFORMANCE

77. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this Section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

78. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM or Alternate RPM within forty-eight (48) hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirement of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

XXIII. ASSURANCE OF ABILITY TO COMPLETE WORK

79. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within thirty (30) days after approval of the RD Work Plan, one of the following: (a) a performance bond; (b) a letter of credit; (c) a guarantee by a third party; or (d) internal financial information to allow EPA to determine that Respondents have sufficient assets available to perform the Work.

Respondents shall demonstrate financial assurance in an amount no less than the estimate of cost for the Remedial Design and Remedial Action contained in the Record of Decision for the Site.

If Respondents seek to demonstrate ability to complete the Remedial Action by means of internal financial information, or by guarantee of a third party, they shall re-submit such information annually, on the anniversary of the effective date of this Order.

If EPA determines that such financial information is inadequate at any time, Respondents shall, within thirty (30) days after receipt of EPA's written notice of such a determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above. -

80. At least seven (7) days prior to commencing any Work at the Site pursuant to this Order, Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to

persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIV. UNITED STATES NOT LIABLE

81. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXV. ENFORCEMENT AND RESERVATIONS

82. EPA reserves the right to bring an action against any Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States relating to the Site and not reimbursed by Respondents. This reservation shall apply to all costs including, but not limited to, past costs, future costs, oversight costs, direct and

indirect costs, and accrued interest as provided in CERCLA Section 107(a).

83. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform any response action it deems necessary as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

84. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9601, et seq., or any other applicable law. Respondents shall be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for the costs of any such additional actions.

85. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA and any other applicable statutes or regulations.

86. Each Respondent shall be subject to civil penalties under Section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$25,000 for each day in which a Respondent willfully violates, or fails or refuses to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, without

sufficient cause, may result in liability under Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

87. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

88. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by such court's order.

XXVI. EFFECTIVE DATE AND COMPUTATION OF TIME

89. This Order shall be effective forty-five (45) calendar days from the date this Order is signed by the Regional Administrator. All times for performance of ordered activities shall be calculated from this effective date.

XXVII. ATTACHMENTS

90. The following attachments are made part of, incorporated into, and enforceable as part of this Order:

- Attachment 1 Martha C. Rose Chemicals, Inc. ROD 3/6/92
- Attachment 2 Martha C. Rose Chemicals, Inc. SOW
- Attachment 3 Martha C. Rose Chemicals, Inc. Site Map

XXVIII. OPPORTUNITY TO CONFER

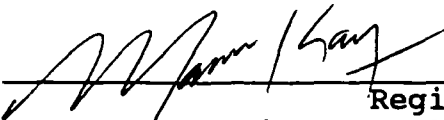
91. Respondents may, within ten (10) days after the date this Order is signed, request a conference with EPA to discuss this Order. If requested, the conference shall occur within thirty (30) days of the date this Order is signed, at EPA's offices at 726 Minnesota Avenue, Kansas City, Kansas.

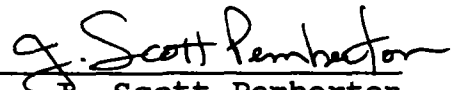
92. The purpose and scope of this conference shall be limited to issues relating to the implementation of the response actions required by this Order and the extent to which Respondents intend to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative.

93. Requests for a conference must be by telephone followed by written confirmation mailed that day to either:

J. Scott Pemberton
Office of Regional Counsel
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101
Telephone: (913) 551-7276

So Ordered, this 2 day of September, 1992

BY: 
Regional Administrator
U.S. Environmental Protection Agency


J. Scott Pemberton
Senior Assistant Regional Counsel

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ATTACHMENT 1

**STATEMENT OF WORK
FOR
THE REMEDIAL DESIGN AND REMEDIAL ACTION WORK PLANS
AT
THE MARTHA C. ROSE CHEMICALS SITE
HOLDEN, MISSOURI**

I. PURPOSE

The purpose of this Statement of Work (SOW) for the Martha C. Rose Chemicals Site is to implement the Record of Decision for this Site which was signed by the Regional Administrator of Region VII of the U.S. EPA on March 6, 1992. The U.S. EPA Superfund Remedial Design and Remedial Action Guidance (OSWER Directive 9355.0-4A), all other applicable EPA guidance, the Record of Decision, the approved Remedial Design (RD) and Remedial Action (RA) Work Plans, and this SOW shall be followed in designing, implementing, and submitting deliverables for the Remedial Action at the Martha C. Rose Chemicals Site.

II. DESCRIPTION OF THE REMEDIAL ACTION

The Performance Standards and specifications of the major components of the Remedial Action for the Martha C. Rose Chemicals Site to be designed and implemented by the Respondents are:

1. Soil Removal

Contaminated surface soils, subsurface soils and pond sediments shall be excavated and disposed or treated prior to off-Site disposal. Analytical results from samples taken during the implementation of the remedial investigation (RI) identified areas where the surface soil is contaminated with PCBs in excess of 10 parts per million (ppm). The soil in each such area shall be excavated to a depth of not less than ten inches. The RD and RA Work Plans shall also address PCB-contaminated subsurface soils and pond sediments. Contaminated subsurface soils and pond sediments shall be excavated in areas where such contamination exceeds 10 ppm PCBs. Off-Site disposal or treatment prior to off-Site disposal of surface and subsurface soils, and pond sediments shall be in accordance with Section II.4.A of this SOW. The RD and RA Work Plans shall identify the specific measures that will be implemented to eliminate or reduce dust emissions to the maximum extent practicable during soil and sediment excavation activities.

Prior to off-Site disposal, excavated soils and sediments

shall be sampled and analyzed in accordance with the Toxicity Characteristic Leaching Procedure (TCLP) set forth in Appendix II of 40 C.F.R. Part 261, and be disposed in accordance with applicable law, including the Land Disposal Restrictions set forth in 40 C.F.R. Part 268.

Post-excavation sampling and analysis shall be conducted. The RD and RA Work Plans shall contain a post-excavation sampling and analysis plan developed for the purpose of ensuring that excavation in all areas of contamination has achieved the Performance Standards established under this SOW and for the purpose of ensuring that cross-contamination or recontamination has not occurred in areas previously determined to be clean or in areas that may be impacted by soil excavation activities. If post-excavation sampling and analysis indicates the Performance Standards have not been attained in any area, excavation shall be performed in such areas at a depth of not less than ten inches followed by post-excavation sampling and analysis. Excavation and post-excavation sampling and analysis shall be repeated in all contaminated areas until the applicable Performance Standards have been attained.

Upon determining that all areas of the Site have achieved the Performance Standards, a soil cover will be placed over the entire eastern portion of the Site. At a minimum, the soil cover will be bounded on the west by a general north-south line which is concurrent with the western most boundary of the western most excavated segment excavated during the Remedial Action. The cover will be bounded on the north, east and south by the facility boundaries. All material used in the cover will be shown to be free of PCBs (less than 1 ppm PCB). At no location will the cover be less than 10 inches thick. The final grade of the cover will result in a uniform surface with no more than a 2% slope at any point. Upon completion, the cover shall be seeded and hydro mulched.

2. Structure Removal

The Main Building, the South Warehouse and the Storage Shed shall be dismantled and removed from the Site. All components of each structure, including the concrete floor slabs and footings, shall be either disposed off-Site or treated prior to off-Site disposal. Off-Site disposal or treatment prior to off-Site disposal shall be conducted in accordance with Section II.4.B of this SOW. The RD and RA Work Plans shall identify the specific measures that will be implemented to eliminate or reduce dust emissions to the maximum extent practicable during structure dismantling and removal activities.

Off-Site disposal of structure components shall be in accordance with applicable law, including the Land Disposal Restrictions contained in 40 C.F.R. Part 268.

3. Stream Sediment Removal

PCB-contaminated sediments from the unnamed tributary that flows from the southern portion of the facility to East Pin Oak Creek, and PCB-contaminated sediments from East Pin Oak Creek shall be excavated and disposed or treated prior to off-Site disposal. A health based action level of 0.18 ppm PCBs for stream sediment was derived for this Site during implementation of the RI. Sediments in both the unnamed tributary to East Pin Oak Creek and East Pin Oak Creek were found to exceed this limit. Due to the low threshold contamination level for sediments and the character of stream sediments, all stream sediments will be excavated at the Site.

The stream sediment excavation in any area will progress until: 1) the remaining sediment is determined by post-excavation sampling and analysis to be less than 0.18 ppm; 2) the excavation reaches a depth of four feet; or 3) bedrock is encountered. Off-Site disposal or treatment prior to off-Site disposal shall be conducted in accordance with Section II.4.A of this SOW. The RD and RA Work Plans shall identify the specific measures to be taken to prevent the spread of contamination during sediment excavation and to prevent runoff from de-watering and other activities.

Prior to off-Site disposal, excavated sediments shall be sampled and analyzed in accordance with the Toxicity Characteristic Leaching Procedure (TCLP) set forth in Appendix II of 40 C.F.R. Part 261, and shall be disposed in accordance with applicable law, including the Land Disposal Restrictions set forth in 40 C.F.R. Part 268.

When stream sediment excavation is completed, including all necessary sampling and analysis, the stream courses shall be backfilled with clean materials compatible with the existing stream bed material, and the stream bed and over bank areas returned to pre-excavation conditions.

4. Treatment and Disposal

A. Soil and Sediment Disposal

In accordance with current EPA guidance, PCB-contaminated soils and sediments which constitute a principal threat at the Site shall be treated prior to disposal. Analytical results from samples taken during the implementation of the RI indicate three surface soil sample areas contaminated at levels greater than 250 ppm PCBs that constitute a principal threat. The remaining PCB-contaminated surface soils at the facility may be disposed in a TSCA chemical waste landfill. PCB-contaminated subsurface soils, pond sediments and sediments from the unnamed tributary and East

Pin Oak Creek which require excavation under Sections II.1 and II.3 of this SOW shall be evaluated to determine if any of the subsurface soils or sediments are contaminated at levels which constitute a principal threat under current EPA guidance. If contamination in such subsurface soils and sediments are determined by EPA to be a principal threat, they shall be treated prior to disposal.

The feasibility study (FS) evaluated only one method of treatment (incineration) in sufficient detail. The Record of Decision (ROD) allows for the use of equivalent treatment methods or combination of methods which would result in the treatment of PCB-contaminated soils to levels that would not constitute a principal threat. The contaminated residue from any such equivalent treatment method(s) will require incineration, or its equivalent. Specific plan(s) and/or Pilot Study(s) to address such an alternative equivalent treatment method(s) to incineration shall be submitted for EPA approval prior to any implementation in accordance with Submission Summary portion of this SOW.

The specific plan(s) and/or Pilot Study(s) shall include the appropriate specifications to be followed in conducting the Pilot Study(s) and the procedures to be followed to ensure compliance with all applicable Federal and state environmental laws and regulations.

B. Building Component Disposal

In accordance with current EPA guidance, PCB-contaminated debris which constitute a principal threat at the Site shall be treated. Building components include concrete floor slabs and footings, the steel skins, steel structural members, masonry wall partitions, insulation, roofing materials, and miscellaneous debris. Analytical results from samples taken during the implementation of the RI indicate that, with the exception of the concrete floor slabs and the insulation in the Main Building and the South Warehouse, building components do not present a principal threat and therefore may be disposed in a TSCA chemical waste landfill or decontaminated to below 1 ppm PCBs and scrapped.

EPA has determined that the insulation and concrete floor slabs and footings contaminated at levels of 2500 ppm PCBs and above represent a principal threat at this Site, and therefore shall be treated.

The FS evaluated only one method of treatment (incineration) in sufficient detail. The Record of Decision (ROD) allows for the use of equivalent treatment methods or combination of methods which would result in the treatment of building components to levels of PCB contamination that would not constitute a principal

threat. The contaminated residue from any such equivalent treatment method(s) will require incineration, or its equivalent. Specific plans and/or Pilot Studies to address such an alternative equivalent treatment method(s) to incineration shall be submitted for EPA approval prior to implementation in accordance with the Submission Summary portion of this SOW.

The specific plan(s) and/or Pilot Study(s) shall include the appropriate specifications to be followed in conducting the Pilot Study(s) and the procedures to be followed to ensure compliance with all applicable Federal and state environmental laws and regulations.

5. Ground Water Monitoring

A ground water monitoring program shall be designed and implemented for a minimum 10 year period. Ground water monitoring conducted during the RI revealed contamination in the shallow ground water system at the Site. Neither the shallow ground water nor the deep ground water systems are considered to be a reliable source of useable water in significant quantities for any general use.

The ground water monitoring program shall be designed to provide sufficient data to meet the following objectives:

A. to serve as an early warning system in the event the existing contaminated shallow ground water, which recharges to the unnamed tributary on the southwestern portion of the Site, threatens to recontaminate surface waters in the vicinity of the Site;

B. to detect any change in the quality of the shallow or deep ground water systems in the vicinity of the Site; and

C. to provide sufficient information to properly evaluate the success of the Remedial Action.

The ground water monitoring program shall monitor both the shallow and the deep ground water systems, and shall include provisions to address unexpected contingencies. These provisions shall include:

D. the extension of the ground water monitoring program beyond the initial 10 year base period upon the occurrence of certain events including, but not limited to: analytical data indicating a significant increase in contaminant levels; or analytical data indicating significant fluctuations in contaminant levels between sampling events; and

E. implementation of response actions in the event of significant increased levels of contamination in the shallow

ground water system or significant levels of contamination in the deep ground water systems.

The ground water monitoring plan shall establish Performance Standards, subject to EPA review and approval, for the events identified in Section II.5.D of the SOW that will trigger implementation of the response actions required by Section II.5.E of this SOW.

The existing monitoring wells may be utilized in the monitoring well network. However, to establish adequate background and downgradient monitoring capabilities additional wells will be necessary. Upgradient wells, which will serve as background for both the shallow and deep groundwater systems, will be installed to the north and to the east of the facility. In addition, downgradient ground water monitoring wells will be installed, for both the shallow and the deep ground water systems, on the southwest side of the unnamed tributary and west of the facility property line and east of East Pin Oak Creek (a minimum of two pairs of background upgradient wells and two pairs of downgradient wells).

The specific number and location of ground water monitoring wells shall be identified in the RA Work Plan and shall be determined on the basis of achieving the goals identified above. Quarterly ground water monitoring samples will be taken for PCBs and VOCs. Sampling results will be evaluated every eight quarters to determine if the frequency of sampling is appropriate. Upon EPA approval, sampling frequency may be changed after each eight quarter review.

III. SCOPE

The RD/RA shall consist of seven tasks for implementation of the Remedial Action described in Section II of this SOW:

TASK I: Pilot Study Work Plan for any alternatives considered in lieu of incineration, including:

- A. Technical Requirements
- B. Schedule(s)
- C. Quality Assurance Project Plan
- D. Sampling and Analysis Plan
- E. Health and Safety Plan

TASK II: Pilot Study:

- A. Performance Standards Development
- B. Pilot Study Implementation
- C. Pilot Study Report

TASK III: Remedial Design Work Plan(s), including:¹

- A. Schedules
- B. RD Quality Assurance Project Plan
- C. Design Sampling and Analysis Plan
- D. Monitoring Well Installation/Abandonment Plan
- E. Sub-surface Soil Contamination Excavation Plan
- F. Cross-Contamination/Recontamination Prevention Plan
- G. A Post-excavation Verification Plan
- H. Contingency Plan
- I. Construction Quality Assurance Project Plan

TASK IV: Remedial Design, including:

- A. Design Plans and Specifications
- B. Design Phases
- C. Operation and Maintenance Plan
- D. Cost Estimate
- E. Project Schedule
- F. Construction Quality Assurance Objectives
- G. Health and Safety Plan

TASK V: Remedial Action Work Plan(s), including:

- A. Schedule
- B. Ground Water Monitoring Plan
- C. Construction Quality Control Plan

TASK VI: Remedial Action Construction, including:

- A. Responsibility and Authority
- B. Construction Quality Assurance Personnel Qualifications
- C. Inspection Activities
- D. Sampling Requirements
- E. Documentation

TASK VII: Reports:

- A. Progress Reports
- B. Draft Submittals
- C. Final Submittals

¹ This and succeeding tasks shall include onsite treatment of soils and debris if EPA approves such treatment as a result of its review of the Pilot Study Report. Upon EPA's approval, Respondents shall submit a Supplemental RD Work Plan, and supplement any other required submission, to address the full scale alternative treatment system.

TASK I: Pilot Study Work Plan

The Respondents may submit a Pilot Study Work Plan to EPA for review and approval which shall outline the procedures for performing the Pilot Study for any treatment technologies proposed to either replace incineration or to reduce the level of contamination in soil or debris which requires treatment under the ROD to allow disposal of the material in a TSCA chemical waste landfill. The Pilot Study Work Plan shall also include a description of qualifications of key personnel directing the Pilot Study, including contractor personnel. If no alternative treatment to incineration is pursued by the Respondents, Tasks I and II are unnecessary.

The Pilot Study Work Plan shall follow the following format:

1. Project Description and Site Background;
2. Remedial Technology Description;
3. Pilot Study Objectives;
4. Pilot Installation and Start-up;
5. Pilot Operation and Maintenance;
6. Parameters to be Tested;
7. Sampling and Analysis Plan;
8. Analytical Methods;
9. Data Management;
10. Data Analysis and Interpretation;
11. Health and Safety;
12. Residuals Management; and
13. Schedule.

o Pilot Installation and Startup - describe the equipment and materials required and method to be employed to deliver and install the equipment and materials onsite.

o Pilot Operation and Maintenance Procedures - describe the specific conditions under which the Pilot Study will be conducted.

o Parameters to be Tested - list the operating conditions under which the pilot unit(s) to be tested and the variations in control parameters that are to be evaluated (Pilot Study Performance Standards).

o Sampling Plan - describe the location and the schedule for samples to be taken from the pilot plant and analyzed to determine performance; and sampling methods, containers, preservatives, labeling, etc.

o Health and Safety Plan - describe how equipment and material, design, use, and set-up complies with all applicable Federal, state, and local requirements.

TASK II: Pilot Study

Respondents shall perform any Pilot Study as outlined in Section II.4 of this SOW and in accordance with the approved Pilot Study Work Plan, if a treatment alternative to incineration is sought.

Upon completion of the Pilot Study, all results are to be collected and tabulated. Data shall be interpreted by Respondents as to the treatment alternative's effectiveness, implementability, cost and anticipated results of full-scale implementation compared with actual results. Treatment rates shall be evaluated to predict the ability of a full-scale unit to meet engineering specifications and Performance Standards.

Upon completion of the Pilot Study, Respondents shall prepare and submit to EPA for review and approval a draft and final Pilot Study Report in accordance with the Submission Summary. Performance Standards for the full scale treatment system shall be proposed and included in the Pilot Study Report.

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TASK III: Remedial Design Work Plan(s)

The Respondents shall submit a Remedial Design (RD) Work Plan for performance of the Remedial Action to EPA for review and approval. The RD Work Plan shall include plans and schedules for implementation of all Remedial Design and pre-design tasks identified in this SOW for the Remedial Action described in Section II herein including, but not limited to:

1. design sampling and analysis plan, including a RD Quality Assurance Project Plan;
2. Preliminary Design submittal, including design criteria, results of any Pilot Study or treatability study, results of additional-field sampling and pre-design Work, project delivery strategy, preliminary plans, drawings and sketches, required specifications in outline form, and the identification and evaluation of any value engineering proposals, preliminary construction schedules, and Construction Quality Assurance Project Plan (CQAPP) objectives;
3. Intermediate Design submittal that is a continuation and expansion of the Preliminary Design elements, if Respondents perform a value engineering study that

results in a change affecting the environmental design criteria;

4. Pre-final Design submittal consisting of the design plans and specifications, Operation and Maintenance Plan, capital and operating and maintenance cost estimate, initial project schedule for the RA, CQAPP, and specifications for the Health and Safety Plan;

5. Final Design submittal consisting of final design plans and specifications (100% complete), final Operation and Maintenance Plan, final construction cost estimate, final CQAPP, final project schedule for the RA, preliminary Field Sampling Plan (directed at measuring progress towards meeting the Performance Standards); and

6. the RD Work Plan, specifically including:

A. a Monitoring Well Installation/Abandonment Plan which shall outline the procedures for installation of additional ground water monitoring wells and abandonment of any monitoring wells not to be included in the monitoring network. Abandonment procedures shall be carried out in accordance with state and Federal regulations. The Work Plan shall include the number, locations, and procedures for the installation of the additional monitoring wells. A schedule for the performance of these activities shall be included;

B. a Sub-surface Soil Contamination Excavation Plan which shall address the details for determining the extent and level of contamination of sub-surface soils beneath buildings and along sewer lines. Specific rationale and procedures for determining the extent and manner of excavation and disposal of the sub-surface soils shall be included as well as post-excavation sampling and analysis verification procedures;

C. a Cross-Contamination/Recontamination Prevention Plan which shall specifically address the methods and procedures to be employed to prevent the cross-contamination or recontamination of the entire area; and

D. a Post-Excavation Verification Plan which shall verify that Performance Standards have been achieved.

In addition, the RD Work Plan shall include a schedule for completion of the Remedial Action Work Plan.

A Health and Safety Plan for all field design activities shall be submitted concurrently with the RD Work Plan.

If a treatment alternative to incineration is approved by EPA as a result of its review of the Final Pilot Study Report, Respondents shall submit a Supplemental RD Work Plan which specifically addresses the design of the full scale alternative treatment system and any additional studies that may need to be performed. This Supplemental RD Work Plan shall include all the elements identified above, unless otherwise noted, and shall include the Pilot Study(s) results and Performance Standards to be met for the full scale alternative treatment system. Sections of the RD Work Plan which also pertain to the RD Work Plan for alternative treatment may be incorporated into the supplement by reference.

TASK IV: Remedial Design

The Respondents shall prepare final construction plans and specifications to implement each segment of the Remedial Action at the Site as defined in Section II of this SOW (Description of the Remedial Action).

If a treatment alternative to incineration is approved by EPA, Respondents shall prepare final construction plans and specifications for the implementation of a full scale alternative treatment system in accordance with the Submission Summary.

A. Design Plans and Specifications

The Respondents shall develop clear and comprehensive design plans and specifications including, but not limited to, the following listed elements.

1. Discussion of the design strategy and the design based on, at a minimum:
 - a. compliance with all applicable or relevant and appropriate environmental and public health standards; and
 - b. minimization of adverse environmental and public impacts.
2. Discussion of all technical factors of importance, including:
 - a. use of currently accepted environmental control measures and technology;
 - b. the constructability of the design; and

- c. use of currently acceptable construction practices and techniques.
- 3. Description of assumptions made and detailed justification of these assumptions.
- 4. Discussion of the potential sources of error and references to potential operation and maintenance problems.
- 5. Detailed drawings of the proposed design, including:
 - a. qualitative flow sheets; and
 - b. quantitative flow sheets.
- 6. Tables listing equipment and specifications.
- 7. Tables giving material and energy balances.
- 8. Appendices, including:
 - a. sample calculations (one example presented and explained clearly for significant or unique design calculations);
 - b. derivations of equations essential to understanding the submittal; and
 - c. results of laboratory or field tests.

B. Design Phases

Meetings shall occur as needed or when requested by either Party between the Respondents and the U.S. EPA to discuss design issues. The design of the Remedial Action shall include the phases outlined below.

1. Preliminary Design.

For each Remedial Design, Respondents shall submit the Preliminary Design when the design effort is approximately 60% complete. The Preliminary Design shall include at a minimum the design criteria, results of any Pilot Study or treatability study, results of additional field sampling and pre-design Work, project delivery strategy, preliminary plans, drawings, and sketches, the required specifications in outline form, the identification and evaluation of any value engineering proposals, and preliminary construction schedule.

At this stage, the Respondents shall have field verified the existing conditions of the Site. The Preliminary Design

shall reflect a level of effort such that the technical requirements of the project have been addressed and outlined so that they may be reviewed to determine if the Final Design will provide an operable and usable Remedial Action. Supporting data and documentation shall be provided with the Preliminary Design documents defining the functional aspects of the program. The preliminary construction drawings by the Respondents shall reflect organization and clarity. The scope of the technical specifications shall be outlined in a manner reflecting the final specifications. The Preliminary Design submission shall contain design calculations reflecting the same percentage of completion as the designs they support.

2. Correlating plans and specifications.

General correlation between drawings and technical specifications shall be a basic requirement of any set of working construction plans and specifications. Before submitting project specifications, Respondents shall:

- a. Coordinate and cross-check the specifications and drawings; and
- b. Complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

These activities shall be completed prior to submittal of the 95% Pre-final Design submittal for review and approval.

3. Equipment start-up and operator training.

The Respondent shall prepare, and include in the technical specifications governing any proposed treatment systems, contractor requirements for providing: 1) appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up and operation of any treatment systems; and 2) training covering appropriate operational procedures once the startup has been successfully accomplished.

4. Additional studies.

If EPA determines that additional studies to supplement the available technical data are required in order to perform the work described in the ROD, EPA shall notify Respondents in writing of the need for such additional studies. If such studies are required, the Respondents shall furnish all services (including field work as required), materials, supplies, plant, labor, equipment, investigations, studies and superintendence. Sufficient sampling, testing and

analysis shall be performed to optimize the required treatment and/or disposal operations and systems. Within sixty (60) days of receipt of EPA's determination, Respondents shall submit a work plan addressing the additional studies specified by EPA for review and approval.

5. Pre-final Design.

For each Remedial Design, Respondents shall submit the Pre-final Design at 95% completion of design.

The Pre-final Design submittal shall consist of the design plans and specifications, Operation and Maintenance Plan, capital and operating and maintenance cost estimate, initial project schedule for the RA, CQAPP, a Contingency Plan, and specifications for the Health and Safety Plan.

The members of the Independent Quality Assurance Team shall be representatives from independent testing and inspection organizations responsible for examining and testing various materials, procedures, and equipment during the construction. Since the Respondents are responsible for the quality of the remedy, the Independent Quality Assurance Team shall be retained by the Respondents.

6. Final Design.

After approval of the Pre-final Design submission, the Respondents shall execute the required revisions and submit the 100% complete Final Design documents with reproducible drawings and specifications for each Remedial Design.

The Final Design submittal shall consist of the final design plans and specifications (100% complete), the final Operation and Maintenance Plan, final construction cost estimate, final CQAPP, final project schedule for the RA, preliminary Field Sampling Plan (directed at measuring progress towards meeting the Performance Standards), final Contingency Plan, and final Health and Safety Plan specifications. The quality of the design documents should be such that the Respondents would be able to include them in a bid package and invite contractors to submit bids for the construction project.

C. Operation and Maintenance Plan

The Respondents shall prepare an Operation and Maintenance Plan to cover both implementation and long-term maintenance of the Remedial Action, specifically the ten (10) year ground water

monitoring program. The plan shall be composed of the following elements.

1. Description of Normal Operation and Maintenance (O&M), including:
 - a. description of tasks for operation;
 - b. description of tasks for maintenance;
 - c. description of prescribed treatment or operation conditions; and
 - d. schedule showing frequency of each O&M task.
2. Description of Potential Operating Problems, including:
 - a. description and analysis of potential operation problems;
 - b. sources of information regarding problems; and
 - c. common and/or anticipated remedies.
3. Description of Routine Monitoring and Laboratory Testing, including:
 - a. description of monitoring tasks;
 - b. description of required laboratory tests and their interpretation;
 - c. required Data Collection, Quality Assurance Project Plan (QAPP);
 - d. schedule of monitoring frequency and date, if appropriate, when monitoring may cease; and
 - e. description of triggering mechanisms for ground water monitoring results.
4. Description of Alternate O&M, including:
 - a. alternate procedures, should systems fail, to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and the environment or exceed Performance Standards; and
 - b. analysis of vulnerability and additional resource requirements should a failure occur.

5. Response Actions, including:
 - a. description of response actions to be implemented if an event described in Section II.5 of this SOW occurs; and
 - b. schedule for implementing these response actions.
6. Safety Plan, including:
 - a. description of precautions and necessary equipment, etc., for Site personnel; and
 - b. safety tasks required in event of systems failure.
7. Description of Equipment, including:
 - a. equipment identification;
 - b. installation and monitoring components;
 - c. maintenance of site equipment; and
 - d. replacement schedule for equipment and installed components.
8. Records and Reporting Mechanisms required, including:
 - a. daily operating logs;
 - b. laboratory records;
 - c. records for operating costs;
 - d. mechanism for reporting emergencies;
 - e. personnel and maintenance records; and
 - f. monthly/annual reports to State agencies.

D. Cost Estimate

The cost estimate developed in the Feasibility Study (FS) and set forth in the ROD shall be refined to reflect the more detailed/accurate design plans and specifications developed. The cost estimate shall include both capital and Operation and Maintenance costs. An initial cost estimate shall be submitted simultaneously with the Pre-final Design submission and the final cost estimate with the Final Design submission.

E. Project Schedule

The Respondents shall develop a Project Schedule for construction and implementation of each segment of the Remedial Action which identifies timing for initiation and completion of all critical path tasks. Respondents shall specifically identify dates for completion of the project and major interim milestones. An initial project schedule shall be submitted simultaneously with the Pre-final Design Document submission and the final project schedule with the Final Design submission.

F. Construction Quality Assurance Objectives and Project Plan

The Respondents shall identify and document the objectives and framework for the development of a construction quality assurance program including, but not limited to, the following: responsibility and authority, personnel qualifications, inspection activities, sampling requirements, and documentation. The CQAPP objectives shall be identified in the Preliminary Design submittal. The initial CQAPP shall be submitted as part of the Pre-final Design submittal and the final CQAPP shall be submitted as part of the Final Design submittal.

G. Health and Safety Plan

The Respondents shall submit a Health and Safety Plan developed for the RD to address the activities to be performed during Remedial Design.

TASK V: Remedial Action Work Plan(s)

The Respondents shall submit to EPA a Remedial Action (RA) Work Plan for review and approval which shall provide for the implementation of the remedy set forth in the ROD. The RA Work Plan shall include, but is not limited to:

1. schedule for the Remedial Action and the process to continuously update the project schedule;
2. method for selection of the RA Constructor (contractor);
3. schedule for development and submitting other required RA Plans;
4. methodology for implementation of the CQAPP;
5. ground water monitoring plan;
6. methods for identifying and satisfying permitting requirements;

7. methodology for implementation of the Operation and Maintenance Plan;
8. methodology for implementation of the Contingency Plan;
9. tentative formulation of the RA Project Team, including key personnel, description of duties, and lines of authority in the management of the construction activities;
10. schedule for completion of Construction Quality Control Plan (by constructor);
11. procedures and plans for the decontamination of equipment and the disposal of contaminated materials;
12. procedures for data collection during the Remedial Action to validate the completion of the project; and
13. schedule for development and submission of a Performance Standards assessment plan.

A Health and Safety Plan for all Remedial Action field activities shall be submitted concurrently with the RA Work Plan.

If a treatment alternative to incineration is approved by EPA, the RA Work Plan shall include such treatment and shall provide for the implementation of the full scale alternative treatment system. The RA Work Plan shall include all the elements identified for the Remedial Action Work Plan for the treatment alternative unless otherwise noted.

TASK VI: Remedial Action Construction

Respondents shall submit to EPA for review and approval, a Contingency Plan which includes the requirements of OSWER Directive 9355.5-01. This Contingency Plan shall address the full scale alternative treatment system if approved by EPA.

Respondents shall submit to EPA for review and approval, a Construction Quality Control Plan prepared in accordance with current EPA guidance and the Submission Summary. This Construction Quality Control Plan shall address the full scale alternative treatment system if approved by EPA.

Respondents shall develop and implement a CQAPP to ensure, with a reasonable degree of certainty, that a completed Remedial Action will meet or exceed all design criteria, plans and specifications, and Performance Standards. The CQAPP is a site specific document which must be submitted to EPA for approval during the Remedial Design prior to the start of the construction, for the relevant activities. If an alternative treatment to incineration

is approved by EPA, Respondents shall supplement the CQAPP to incorporate requirements specific to such alternative treatment. At a minimum, the CQAPP should include the elements which are summarized below.

A. Responsibility and Authority

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the Remedial Action shall be described fully in the CQAPP. The Respondents shall identify a construction quality assurance officer and the necessary supporting inspection staff.

B. Construction Quality Assurance Personnel Qualifications

The qualifications of the construction quality assurance officer and supporting inspection personnel shall be presented in the CQAPP to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

C. Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the Remedial Action shall be summarized in the CQAPP. The plan shall verify compliance with the applicable environmental requirements which may include, but not be limited to, air quality and emissions monitoring records and waste disposal records (e.g., RCRA transportation manifests), etc. The inspection shall also ensure compliance with all health and safety procedures. In addition to oversight inspections, Respondents shall conduct the following activities.

1. Preconstruction inspection and meeting.

The Respondents shall conduct a preconstruction inspection and meeting to:

- a. review methods for documenting and reporting inspection data;
- b. review methods for distributing and storing documents and reports;
- c. review work area security and safety protocol;
- d. discuss any appropriate modifications of the CQAPP ensure that Site-specific considerations are addressed; and

- e. conduct a Site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person and a copy of the minutes of such a meeting shall be transmitted to EPA.

2. Pre-final inspection.

Upon preliminary project completion, Respondents shall notify the U.S. EPA for the purposes of conducting a pre-final inspection. The pre-final inspection shall consist of a walk-through inspection of the entire project Site. The inspection is to determine whether the project is complete and consistent with the contract documents and the approved Remedial Action. Any outstanding construction items discovered during the inspection shall be identified and noted. Additionally, monitoring equipment shall be operationally tested by Respondents. The Respondents shall certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. The Respondents shall prepare and submit a Pre-final Inspection Report which outlines the outstanding construction items, actions required to resolve items, completion date for these items, and date for final inspection.

3. Final Inspection.

Upon completion of any outstanding construction items, Respondents shall notify the U.S. EPA for the purposes of conducting a final inspection. The final inspection shall consist of a walk-through inspection of the project Site. The pre-final Inspection Report will be used as a checklist with the final inspection focusing on the outstanding construction items identified in the pre-final inspection. Confirmation shall be made that outstanding items have been resolved.

Upon satisfactory completion of the final inspection, a Remedial Action Implementation Report will be prepared by Respondents and submitted to EPA for review and approval.

The Report shall document that the project is consistent with the design specifications, and that Remedial Action is performing adequately. The Report shall include, but is not limited to, the following elements:

- a. synopsis of the Remedial Action and certification of the design and construction;

- b. explanation of any modifications to the plans and why these were necessary for the project;
- c. listing of the criteria, established before the Remedial Action was initiated, for judging the functioning of the Remedial Action, and also explaining any modification to these criteria;
- d. results of Site monitoring, indicating that the Remedial Action will meet or exceed the Performance Standards; and
- e. explanation of the operation and maintenance (including monitoring) to be undertaken at the facility as outlined in Task IV. C.

D. Sampling Requirements

The sampling activities, sample size, sample locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems as addressed in the project specifications shall be presented in the CQAPP.

E. Documentation

Reporting requirements for construction quality assurance activities shall be described in detail in the CQAPP. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the CQAPP.

In accordance with the Submission Summary, Respondents shall begin construction and implementation of the Remedial Action in accordance with the approved design, schedule and CQAPP. The Respondents shall also implement the elements of the approved Operation and Maintenance plan.

TASK VII: Reports

The Respondents shall prepare plans, specifications, and reports as set forth in Tasks I through VI to document the design, construction, operation, maintenance, and monitoring of the Remedial Action. The documentation shall include, but is not limited to, the following:

A. Progress Reports

The Respondents shall, at a minimum, provide the U.S. EPA with signed monthly progress reports during the design and

construction phases and operation and maintenance activities containing:

1. a description and estimate of the percentage of the RD/RA completed;
2. summaries of findings;
3. summaries of changes made in the RD/RA during the reporting period;
4. summaries of contacts with representatives of the local community, public interest groups or State government during the reporting period;
5. summaries of problems encountered or potential problems identified during the reporting period;
6. actions taken or to be taken to rectify problems;
7. changes in personnel during the reporting period;
8. projected work for the next reporting period; and
9. copies of daily reports, inspection reports, laboratory/monitoring data, etc.

B. Draft Submittals

Respondents shall submit to EPA draft reports/submittals in accordance with the schedules specified in the Submission Summary, herein.

C. Final Submittals

The Respondents shall finalize all reports/submittals incorporating comments received on draft submissions in accordance with the schedules specified in the Submission Summary, herein.

SUBMISSION SUMMARY

<u>Submission</u>	<u>Due Date</u>
Draft Pilot Study Work Plan (Task I)	within forty-five (45) days of receipt of EPA's authorization to proceed
Final Pilot Study Work Plan (Task I)	within thirty (30) days of receipt of all comments on Draft Pilot Study Work Plan
Draft Pilot Study Report (Task II)	within thirty (30) days of completion of Pilot Study
Final Pilot Study Report (Task II)	within thirty (30) days receipt of all comments on Draft Pilot Study Report
Draft RD Work Plan (Task III)	within thirty (30) days of receipt of EPA's authorization to proceed
Final RD Work Plan (Task III)	within thirty (30) days of receipt of all comments on the Draft RD Work Plan
Design Phases (Task IV)	
- Preliminary Design (60% completion) <ul style="list-style-type: none">o design criteriao project delivery strategyo preliminary construction scheduleo CQAPP objectives	within sixty (60) days of receipt of approval of Final RD Work Plan
- Intermediate Design	within thirty (30) days receipt of approval of Preliminary Design
- Pre-final Design (95% completion) <ul style="list-style-type: none">o initial cost estimateo initial RA project scheduleo initial O&M Plano initial Contingency Plan	within thirty (30) days of receipt of approval of Preliminary Design or Intermediate Design

<ul style="list-style-type: none"> o initial Health and Safety specifications o initial CQAPP 	
<ul style="list-style-type: none"> - Final Design (100% completion) <ul style="list-style-type: none"> o final cost estimate o final RA project schedule o final O&M Plan o final Contingency Plan o final Health & Safety Plan specifications o final CQAPP 	within thirty (30) days of submittal of Pre-final Design
Draft RA Work Plan (Task V)	within thirty (30) days of approval of Final Design
Final RA Work Plan (Task V)	within thirty (30) days of receipt of all comments on Draft RA Work Plan
Draft Construction Quality Control Plan (Task VI) (by Constructor)	within thirty-five (35) days selection of the RA constructor
Final Construction Quality Control Plan (Task VI)	within thirty (30) days of receipt of all comments on Draft Construction Quality Control Plan
Draft Construction Contingency Plan (Task VI)	to be submitted w/ the Draft Construction Quality Assurance Project Plan
Final Construction Contingency Plan (Task VI)	within thirty (30) days of receipt of all comments on Draft Construction Contingency Plan

Begin construction of Remedial
Actions

within thirty (30) days
of receipt an EPA
authorization to proceed

Pre-final Inspection Report
(Task VI)

within thirty (30) days
after Pre-final
Inspection by EPA

Draft Remedial Action
Implementation Report (Task VI)

within sixty (60) days of
satisfactory completion
of the Final Inspection

Final Remedial Action
Implementation Report (Task VI)

within thirty (30) days
of receipt of all
comments on Draft
Remedial Action
Implementation Report

Progress Reports
(Task VII)

Due by the 10th day of
the month following the
reporting period

SUBMISSION SUMMARY
FOR
ALTERNATIVE TREATMENT DESIGN AND IMPLEMENTATION

<u>Submission</u>	<u>Due Date</u>
Draft RD Work Plan for Alternative Treatment (Task III)	within sixty (60) days of receipt of EPA's approval of the Pilot Study Report
Final RD Work Plan for Alternative Treatment (Task III)	within thirty (30) days receipt of all comments on Draft RD Work Plan for the Alternative Treatment
Design Phases for Alternative Treatment (Task IV)	
- Preliminary Design (60% completion)	within sixty (60) days of receipt of approval of Final RD Work Plan for the Alternative Treatment
- Pre-final Design (95% completion)	within 120 days of receipt of approval of Final RD Work Plan for the Alternative Treatment
o initial cost estimate	
o initial RA project schedule	
o initial O&M Plan w/ O&M QAPP	
o initial RA Health & Safety Plan	
o initial Construction Quality Assurance Objectives	
- Final Design (100% completion)	within twenty (20) days of submittal of Pre-final Design
o final cost estimate	
o final RA project schedule	
o final O&M Plan w/ O&M QAPP	
o final RA Health & Safety Plan	
o final Construction Quality Assurance Objectives	

Draft RA Work Plan for the
Alternative Treatment (Task V)

within forty-five (45)
days of approval of
Final Design

Final RA Work Plan for the
Alternative Treatment (Task V)

within thirty (30) days
of receipt of all
comments on Draft RA Work
Plan for the Alternative
Treatment

Draft Construction Quality
Assurance Plan for the
Alternative Treatment (Task VI)

within thirty (30) days
of receipt of approval of
Final Design

Final Construction Quality
Assurance Plan for the
Alternative Treatment (Task VI)

within thirty (30) days
receipt of all comments
Draft Construction
Quality Assurance Plan

Draft Construction Quality
Control Plan (Task VI)
(by constructor)

within thirty-five (35)
days of selection of the
RA constructor

Final Construction Quality
Control Plan (Task VI)

within thirty (30) days
of receipt of all
comments on Draft
Construction Quality
Control Plan

Draft Construction Contingency
Plan for the Alternative
Treatment (Task VI)

to be submitted w/ the
Draft Construction
Quality Assurance Plan

Final Construction Contingency
Assurance Plan for the
Alternative Treatment (Task VI)

within thirty (30) days
of receipt of all
comments on Draft
Construction Contingency
Plan

Construction of Remedial Actions
for the Alternative Treatment

within 120 days of
receipt of approval of
Final Construction
Quality Assurance Plan

Pre-final Inspection Report
for the Alternative Treatment
(Task VII)

within twenty (20) days
Pre-final Inspection by
EPA

Draft Remedial Action
Implementation Report for the
Alternative Treatment (Task VII)

within sixty (60) days of
satisfactory completion
of the Final Inspection



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

January 26, 1993

MEMORANDUM

SUBJECT: Conversion of SPFD Remedial Administrative Records to
Microform

FROM: *Barry Thierer*
Barry Thierer
SPFD Remedial Administrative Record Coordinator

TO: Steve Kinser
Remedial Project Manager

The Administrative Record(s) for the following SPFD sites
assigned to you have been transferred to microform:

Martha Rose Chemical Co.
Resource Services Inc.

The paper copies of the Administrative Records are eligible
for transfer to the Federal Records Center. If you have no
objection, I will initiate the paperwork for transfer. In the
event a need arises for the paper copy, it can be easily
retrieved. The microform copies are available for reproduction
or research.

cc: Ron King